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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/889,745	10/15/2001	Anthony John Peach	GH-01383	8923

7590 01/31/2003

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EXAMINER

SINGH, SUNIL

ART UNIT	PAPER NUMBER
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3673

DATE MAILED: 01/31/2003

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/889,745

Applicant(s)

Peach et al.

Examiner

Sunil Singh

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136 (a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☐ Responsive to communication(s) filed on _____.
- 2a) ☐ This action is FINAL. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11; 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-7 and 11-13 is/are pending in the application.
- 4a) Of the above, claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-7 and 11-13 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claims _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☒ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on Oct 15, 2001 is/are a) ☐ accepted or b) ☒ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on _____ is: a) ☐ approved b) ☐ disapproved by the Examiner.
If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

- 13) ☒ Acknowledgement is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
a) ☒ All b) ☐ Some* c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☒ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
*See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgement is made of a claim for domestic priority under 35 U.S.C. § 119(e).
a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgement is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892) 4) ☐ Interview Summary (PTO-413) Paper No(s). _____
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948) 5) ☐ Notice of Informal Patent Application (PTO-152)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449) Paper No(s). _____ 6) ☐ Other:

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DETAILED ACTION

The preliminary amendment filed 10/15/01 has been entered.

Drawings

1. The drawings are objected to as failing to comply with 37 CFR 1.84(p)(5) because they do not include the following reference sign(s) mentioned in the description: page 6 line 32, reference character "17". A proposed drawing correction or corrected drawings are required in reply to the Office action to avoid abandonment of the application. The objection to the drawings will not be held in abeyance.
2. The drawings are objected to as failing to comply with 37 CFR 1.84(p)(4) because reference character "17" has been used to designate both water jet page 6 line 32 and mounting assembly page 7 line 22. A proposed drawing correction or corrected drawings are required in reply to the Office action to avoid abandonment of the application. The objection to the drawings will not be held in abeyance.

Specification

3. The title of the invention is not descriptive. A new title is required that is clearly indicative of the invention to which the claims are directed.
4. The following title is suggested: ROCK BORING DEVICE WITH AN OSCILLATING AND NUTATING ROTARY DISC CUTTER.

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Claim Rejections - 35 USC § 112

5. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

6. Claims 1-7 and 11-13 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

Claim 1, the applicant's relationship of "oscillating" and "nutate" is confusing. According to Webster's Ninth New Collegiate Dictionary,

oscillating is defined as **to swing backward and forward like a pendulum; to move or travel back and forth between two points;**

nutate is defined as **the act of nodding; oscillatory movement of the axis of a rotating body; wobble.**

Therefore, the phrase "and at least one of driven and free to nutate" is awkward.

Claim 6 lines 2-3, "whereby as to be pivotable" is grammatically awkward. Claim 6 is further confusing because it appears that the rock boring device is pivotable about an axis **transverse** the boom not **longitudinal**.

Claim 12 appears to be incorrect. Claim 12 calls for the rotary disc **velocity** is controlled by a computer program. However, the appears to be incorrect. Applicant is directed to page 6 where it appears that the **angle** of the rotary disc is controlled by the computer program.

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Claim Rejections - 35 USC § 102

7. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless -

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

8. Claims 1-2 are rejected under 35 U.S.C. 102(b) as being anticipated by Bodine (US 4261425).

Bodine discloses a rock boring device (see col. 1 line 6) including a rotary disc (see Fig. 5a-5d), the rotary disc is driven in an oscillating (see col. 1 line 37) and nutating manner (see col. 1 line 31). The device has a mounting section and a driven section, the mounting section is angularly offset from an axis of the driven section (see Fig. 3). Control of the speed of the rotary disc is taught (see col. 4 line 3).

Claim Rejections - 35 USC § 103

9. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

10. Claims 3-7 and 13 are rejected under 35 U.S.C. 103(a) as being unpatentable over Stoebe (US 6357831) in view of Bodine '425.

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Stoebe discloses a rock boring machine, a rock boring device is mounted on a boom, the boom can pivot about both a horizontal and vertical axis. The rock boring device is pivotable about a transverse axis to the boom. The rock boring machine is anchored (see Figs. 1,2). Stoebe discloses the invention substantially as claimed. However, Stoebe's rock boring device is not a rotary disc that can oscillate and nutate. Bodine teaches an oscillating and nutating rotary disc (see col. 1; and Figs. 5a-5d). It would have been considered obvious to one of ordinary skill in the art to modify Stoebe by substituting the rock boring device as taught by Bodine for the rock boring device disclosed by Stoebe since it cuts more effectively (see Bodine reference col. 1 line 28+).

11. Claims 3 and 11 are rejected under 35 U.S.C. 103(a) as being unpatentable over Dubois (US 3663054) in view of Bodine '425

Dubois discloses a rock boring machine, a rock boring device is mounted on a boom, a plurality of rock boring devices are carried by the rock boring machine (see Fig. 1). Dubois discloses the invention substantially as claimed. However, Dubois's rock boring devices are not rotary discs that can oscillate and nutate. Bodine teaches an oscillating and nutating rotary disc (see col. 1; and Figs. 5a-5d). It would have been considered obvious to one of ordinary skill in the art to modify Dubois by substituting the rock boring device as taught by Bodine for the rock boring devices disclosed by Dubois since it cuts more effectively (see Bodine reference col. 1 line 28+).

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12. Claims 3 and 12 rejected under 35 U.S.C. 103(a) as being unpatentable over Smith et al. (US 6062650) in view of Bodine '425.

Smith et al. discloses a rock boring machine, a rock boring device is mounted on a boom, the angle of the rock boring device is controlled by a computer program (see col. 9 line 10+). Smith et al. discloses the invention substantially as claimed. However, Smith et al. rock boring device is not a rotary disc that can oscillate and nutate. Bodine teaches an oscillating and nutating rotary disc (see col. 1; and Figs. 5a-5d). It would have been considered obvious to one of ordinary skill in the art to modify Smith et al. by substituting the rock boring device as taught by Bodine for the rock boring device disclosed by Smith et al. since it cuts more effectively (see Bodine reference col. 1 line 28+).

Conclusion

13. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. WIPO document (WO 00/46486) teaches a rotary disc cutter that oscillates and nutates.

14. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Sunil Singh whose telephone number is (703) 308-4024. The examiner can normally be reached on Monday through Friday from 8:30 AM to 5:00 PM.

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If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Heather Shackelford, can be reached on (703) 308-2978. The fax phone number for the organization where this application or proceeding is assigned is (703) 305-7687.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is (703) 308-2168.

Sunil Singh



Patent Examiner

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1/13/03